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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,804	01/21/2005	Jacobus A Rozendaal	SFM-0001-US	3801
59115	7590	09/04/2007	EXAMINER	
BRUNET & CO. LTD. 10712 MELROSE DR. KOMOKA, ON N0L-1R0 CANADA			MCGOWAN, JAMIE LOUISE	
			ART UNIT	PAPER NUMBER
			3671	
			MAIL DATE	DELIVERY MODE
			09/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/521,804	ROZENDAAL ET AL.
	Examiner	Art Unit
	Jamie L. McGowan	3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 July 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 51-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 51-70 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 51 and 62-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietrich, Jr. et al. (6,896,068) in view of McFarlane (6,698,525).

Regarding claim 1, Dietrich, Jr. et al. discloses a tillage implement comprising:

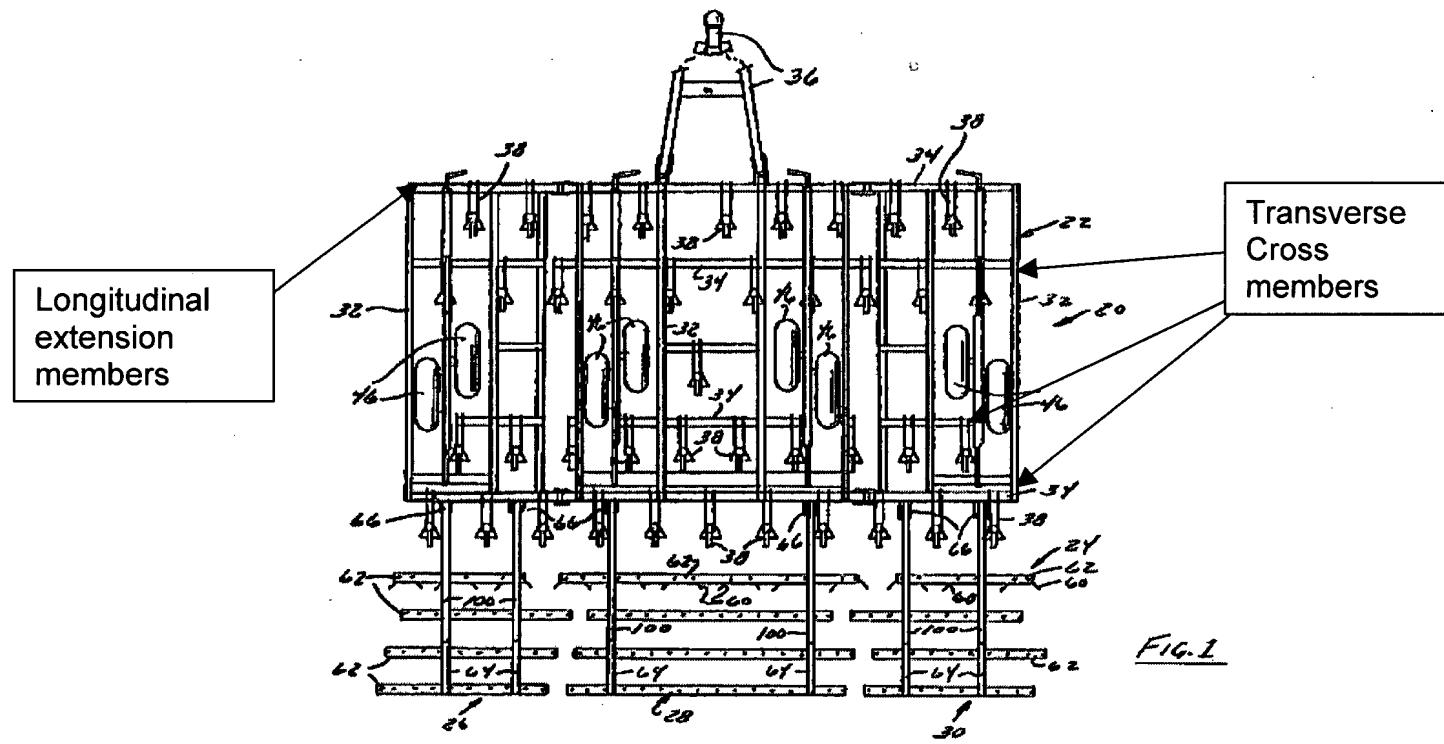
- A frame having three or more longitudinally spaced apart transverse cross members (34)
- A plurality of individual tillage implements (38)
- A mounting means (66) for each individual tillage assembly (38)
- Three or more longitudinally spaced apart rows of laterally spaced apart individual tillage assemblies, each tillage assembly (38) removably mounted on the frame using the mounting means (66), a tillage assembly (38) in a given row being staggered with respect to the coulter wheel assemblies (38) in a longitudinally adjacent row (Figure 1)

While Dietrich, Jr. Et al. discloses the invention as described above, it fails to disclose that the tillage implements could be coulter wheel assemblies. Like Dietrich, Jr. et al., McFarlane also discloses a tillage implement. Unlike Dietrich, Jr. et al., McFarlane further discloses that coulter wheel assemblies that are aligned with the direction of trammel of the implement (column 3 lines 11-19) can be used for tillage operations. McFarlane teaches that low-tilling is desirable because it does not disturb the soil as much and helps the soil better retain moisture and prevent erosion (column 1 lines 26-35). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to replace the harrow tines of Dietrich, Jr. et al. with the coulter wheels of McFarlane for low tillage operations so as to cause less disruption to the soil.

Regarding claim 62, the combination of Dietrich, Sr. et al. and McFarlane discloses that the coulter wheel assemblies are laterally adjustable by arranging them in different configurations.

Regarding claims 63 and 64, the combination of Dietrich, Sr. et al. and McFarlane discloses that the coulter wheel assemblies are mounted on the transverse cross-members and one or more are mounted to the transverse cross members by longitudinal extension members (See Figure 1 below).



Regarding claim 67, the combination of Dietrich, Sr. et al. and McFarlane discloses that the rows consist of laterally spaced apart coulter wheel assemblies (Figure 1).

Regarding claim 68, the combination of Dietrich, Sr. et al. and McFarlane discloses that the apparatus discloses the kit except for a set of instructions; however, the examiner takes OFFICIAL NOTICE that anything that comes disassembled in a kit would also come with a set of instructions for reassembly.

Regarding claim 69, the combination of Dietrich, Sr. et al. and McFarlane discloses that a stilt means (46) for increasing the height of the cultivator frame relative to ground level.

Regarding claim 70, the apparatus discloses the method.

3. Claims 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietrich, Sr. et al. (6,896,068) in view of McFarlane (6,698,525) as applied to claim 51 above and further in view of McIlhargey (6,412,571) (cited by applicant).

Regarding claims 52-55, the combination of Dietrich and McFarlane discloses the invention as described above in Paragraph 2 but fails to disclose a device that allows the coulter wheel assemblies (2,3) to deflect upwardly about a horizontal axis when it impacts an obstacle. Like the combination of Dietrich, Sr. et al. and McFarlane, McIlhargey discloses a coulter wheel assembly. Unlike the combination, McIlhargey discloses a device that responds to obstacles by deflecting upwardly. McIlhargey's coulter wheel assembly comprises a spring about which the coulter wheel assembly can deflect when an obstacle is encountered. The coulter wheel assembly rotates upwardly about a horizontal spring axis when an obstacle is encountered. The spring (4) has upper and lower shank ends (2 and 3) extending tangentially therefrom wherein the

lower shank (3) deflects upwardly about the horizontal spring axis in response to impact with an obstacle. McIlhargey teaches that this arrangement provides superior shock loading characteristics (column 1 lines 38-39) and maintains more constant ground working conditions (column 2 lines 46-53). Given the teaching of McIlhargey, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the coulter wheel assembly of McIlhargey in the tillage implement of the combination of Dietrich, Sr. et al. and McFarlane to provide optimal soil penetration and uniformity and reducing the chance of damage when encountering an obstacle.

4. Claims 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietrich, Sr. et al. (6,896,068) in view of McFarlane (6,698,525) as applied to claim 51 above and further in view of Rawson (5,462,124).

Regarding claims 56-58, the combination of Dietrich, Sr. et al. and McFarlane discloses the invention as described above but fails to disclose that the coulter wheel assemblies can pivot around a vertical axis. Like the combination, Rawson also discloses a coulter wheel assembly. Unlike the combination, Rawson further discloses that the coulter wheel assemblies can pivot about a vertical axis through the use of a vertically extending hollow strut (42) having a pair of opposed horizontal slots (43) therethrough and a shank with a horizontal hole, wherein the shank (31) is secured within the hollow strut (42) by means of a horizontal pin (44) extending through the slots (43) and the hole, thereby permitting rotational movement of the shank (31) within the hollow strut about the vertical axis (See Figure 5 for pin (44) extending all the way through hollow strut (42) and shank (31)). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the pivoting structure of Rawson in the device of the combination of Dietrich, Sr. et al. and McFarlane to allow the coulter wheel assembly to pivot to prevent breakage and avoid damage in the event that an obstacle is encountered while working a field.

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5. Claims 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietrich, Sr. et al. (6,896,068) in view of McFarlane (6,698,525) as applied to claim 51 above, and further in view of McMahon et al. (6,802,270).

While the combination of Dietrich, Sr. et al. and McFarlane discloses the device as described above, it fails to disclose that each row further comprises removable individual field working tools. Like the combination McMahon also discloses a field tillage implement. Unlike the combination, McMahon further discloses that plows can be attached behind coulter wheels on a tillage machine. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include plows behind the coulters of each row for more intense tillage operations as there would be a reasonable expectation of success that the addition of the plows to the coulter would allow for tillage of rougher fields.

Regarding claims 60 and 61, the combination of Dietrich, Sr. et al., McFarlane and McMahon discloses that the individual coulter wheel assemblies and individual field working tools in a given row are staggered with respect to all coulter wheel assemblies and field working tools in longitudinally adjacent rows of the implement.

Response to Arguments

6. Applicant's arguments with respect to claim 07/10/2007 have been considered but are moot in view of the new ground(s) of rejection.

7. With regard to the McIlhargey reference, Applicant argues that McIlhargey teaches away from a laterally adjustable coulter wheel assembly. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The

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combination of Dietrich, Sr. et al. and McFarlane shows a removable, and therefore laterally adjustable coulter wheel assembly. The fact that McIlhargey is not laterally adjustable does not mean the coulter wheel of the resulting combination would be laterally rigid. As the assemblies are already adjustable, one of ordinary skill in the art would maintain the adjustability of the coulter assemblies to maintain the flexibility of the tillage machine.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

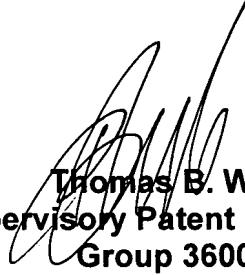
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamie L. McGowan whose telephone number is (571)272-5064. The examiner can normally be reached on Monday through Friday 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on (571)272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jamie L. McGowan
August 30, 2007



Thomas B. Will
Supervisory Patent Examiner
Group 3600